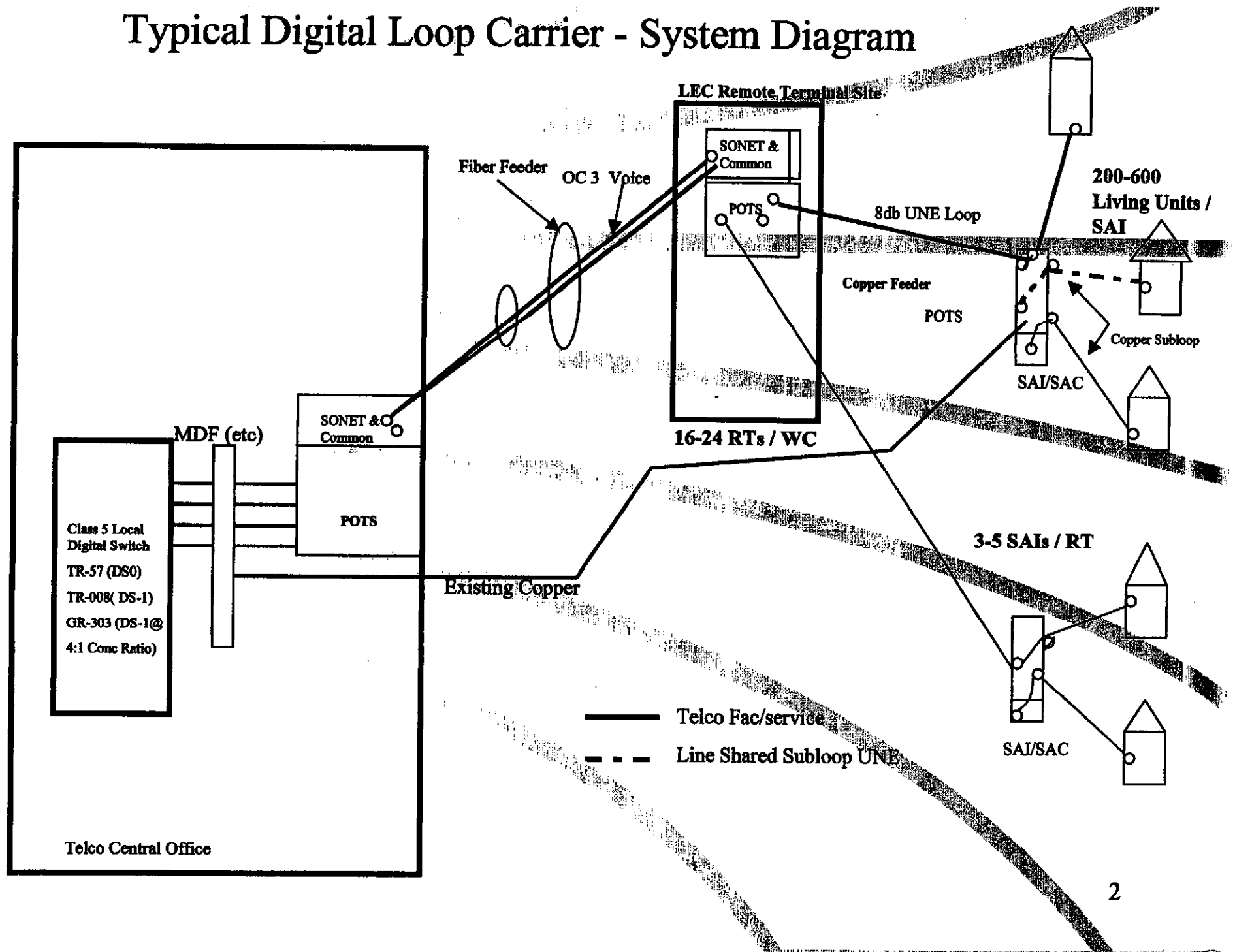# Pronto Industry Collaborative
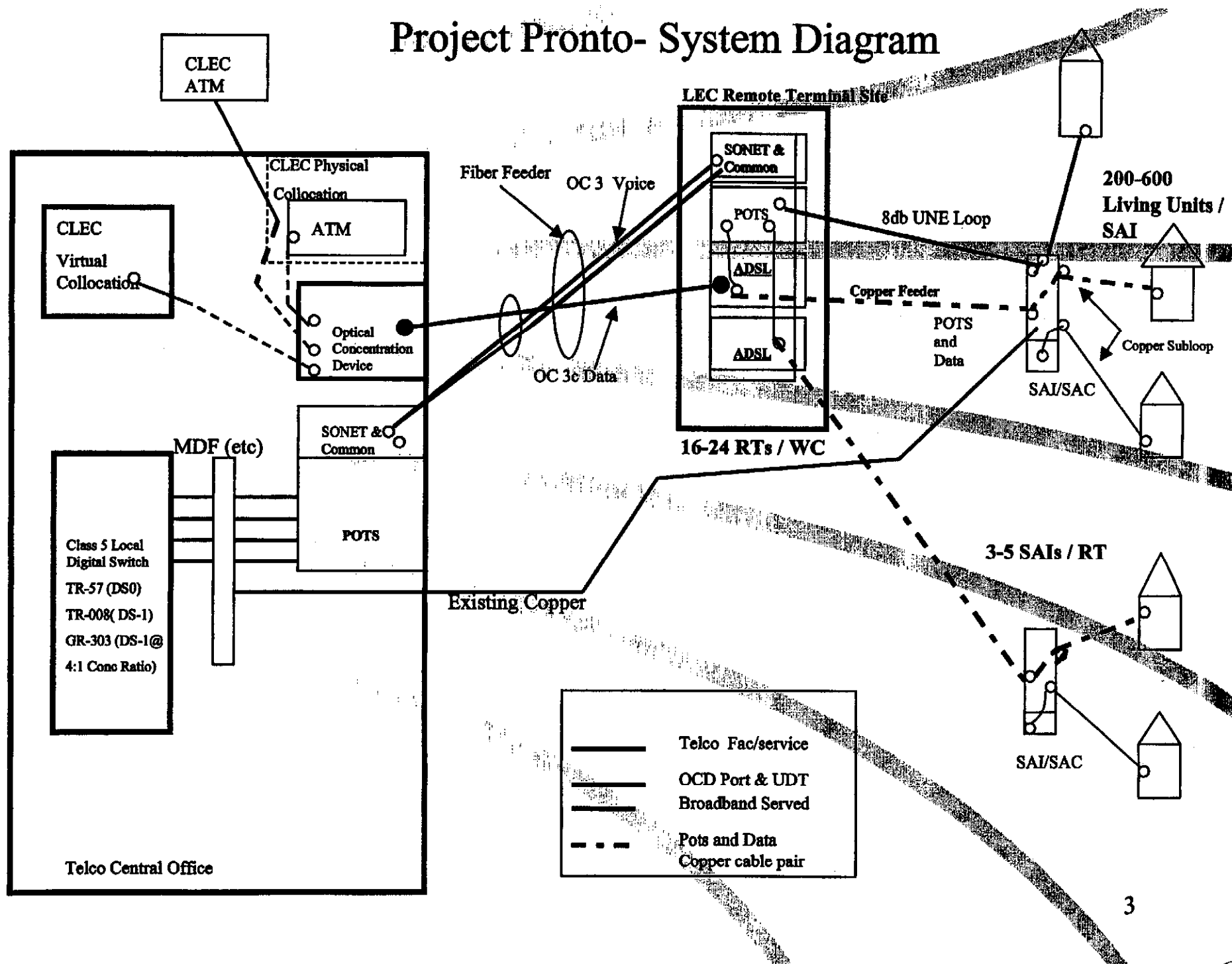
October 24, 2000

Pronto Today
Technology and Deployment

George Kubes
Area Manager - Broadband Service

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Typical Digital Loop Carrier - System Diagram

LEC Remote Terminal Site

SONET & Common

POTS

Fiber Feeder

OC 3   Voice

8db UNE Loop

Copper Feeder

POTS

200-600 Living Units / SAI

Copper Subloop

SAI/SAC

SONET & Common

POTS

16-24 RTs / WC

3-5 SAIs / RT

Existing Copper

MDF (etc)

Class 5 Local Digital Switch

TR-57 (DS0)

TR-008(DS-1)

GR-303 (DS-1@ 4:1 Conc Ratio)

Telco Central Office

SAI/SAC

——— Telco Fac/service

- - - - Line Shared Subloop UNE

2

2

Project Pronto- System Diagram

CLEC
ATM

CLEC Physical Collocation

ATM

CLEC
Virtual
Collocation

Optical
Concentration
Device

SONET &
Common

POTS

MDF (etc)

Class 5 Local
Digital Switch
TR-57 (DS0)
TR-008(DS-1)
GR-303 (DS-1@
4:1 Conc Ratio)

Telco Central Office

Fiber Feeder

OC 3 Voice

OC 3c Data

LEC Remote Terminal Site

SONET &
Common

POTS

ADSL

ADSL

16-24 RTs / WC

8db UNE Loop

Copper Feeder

POTS
and
Data

SAI/SAC

Existing Copper

200-600
Living Units /
SAI

Copper Subloop

3-5 SAIs / RT

SAI/SAC

	Telco Fac/service
	OCD Port & UDT Broadband Served
	Pots and Data Copper cable pair

3

3

Current Services -TDM

LS 2000 Services	LS 2012 Services	UMC-1000 Services
• POTS	• POTS	• POTS
• Specials	• Specials	• Specials
• ISDN	• ISDN	• ISDN
• Coin	• Coin	• Coin
• P-Phone	• P-Phone	• P-Phone
• DDS	• DDS	• DDS
• HiCap (DS1/T1)	• HiCap (DS1/T1)	• HiCap (DS1/T1)
• ADSL	• ADSL	• ADSL

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Litespan Current Services -ATM

- Litespan 2000/2012
- Service: ADSL Service
- QoS: UBR for DMT
           CBR for DMT (NOT DEPLOYED)
           UBR for CAP (NOT DEPLOYED)
- Wholesale: Broadband Service

Litespan Current Services
ADSL-UBR

- Max transmission rates: 832/8128 kbps.
- Provision at 32 kbps increments
- PVC only

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UMC-1000 Current Services -ATM

- Service: ADSL Service
- QoS: UBR for DMT
- Wholesale: Broadband Service

7

⑦

UMC-1000 Current Services
ADSL-UBR

- Max transmission rates: 832/8128 kbps.
- Provision at 256 "profiles"
- PVC only

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Modem Compatibility

- University of New Hampshire maintains list and performs testing of equipment.
- Recommended Procedure
  - Contact UNH to determine if modem has been tested with transport system.
  - Contact manufacture-supplier of modem for warranty or certification for compatibility.

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Optical Concentration Device

- OCD performs consolidation and routing function from multiple RT sites in Wire Center

- Service: ADSL

- QoS: UBR for DMT
            CBR for DMT (NOT DEPLOYED)

- Connectivity from OCD port to Collo is OC-3c or DS-3

Subloop Access at Pronto NGDLC

- CLEC may obtain access to copper subloop:
  - At existing access point ie. SAI cabinet
  - Place a cabinet or structure & install equipment
  - Provide own transport
  - Order UNE from access point to end user location

Subloop Access at Pronto NGDLC

- ## CLEC has ALL existing options plus:
  - Use Broadband Service
  - Collocate equipment at CEV's & Hut's
    - SBC voluntarily upsized all Pronto NGDLC CEV & Huts deployed after Sept. 15, 2000
  - Collocate equipment at cabinets -
    - Collocate equipment at Pronto NGDLC RT sites if:
      - Space is available
      - Power is adequate
      - Heat dissipation is adequate

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Subloop Access at Pronto NGDLC

- CLEC may at Pronto NGDLC sites use Special Construction Arrangement (SCA) to:
  - Provide space within or place adjacent structure
  - Obtain access to copper subloop via Engineering Controlled Splice (ECS)
  - Obtain Access to dark fiber for transport
- Information for ECS/SCA in Accessible Letter
  "Notification of availability of Engineering Controlled Splice/Special Construction Arrangement (ECS/SCA)" dated September 15, 2000

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SBC PROJECT PRONTO

BROADBAND SERVICE
PRODUCT SUMMARY

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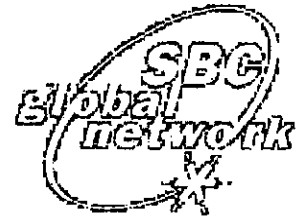
SBC PROJECT PRONTO-
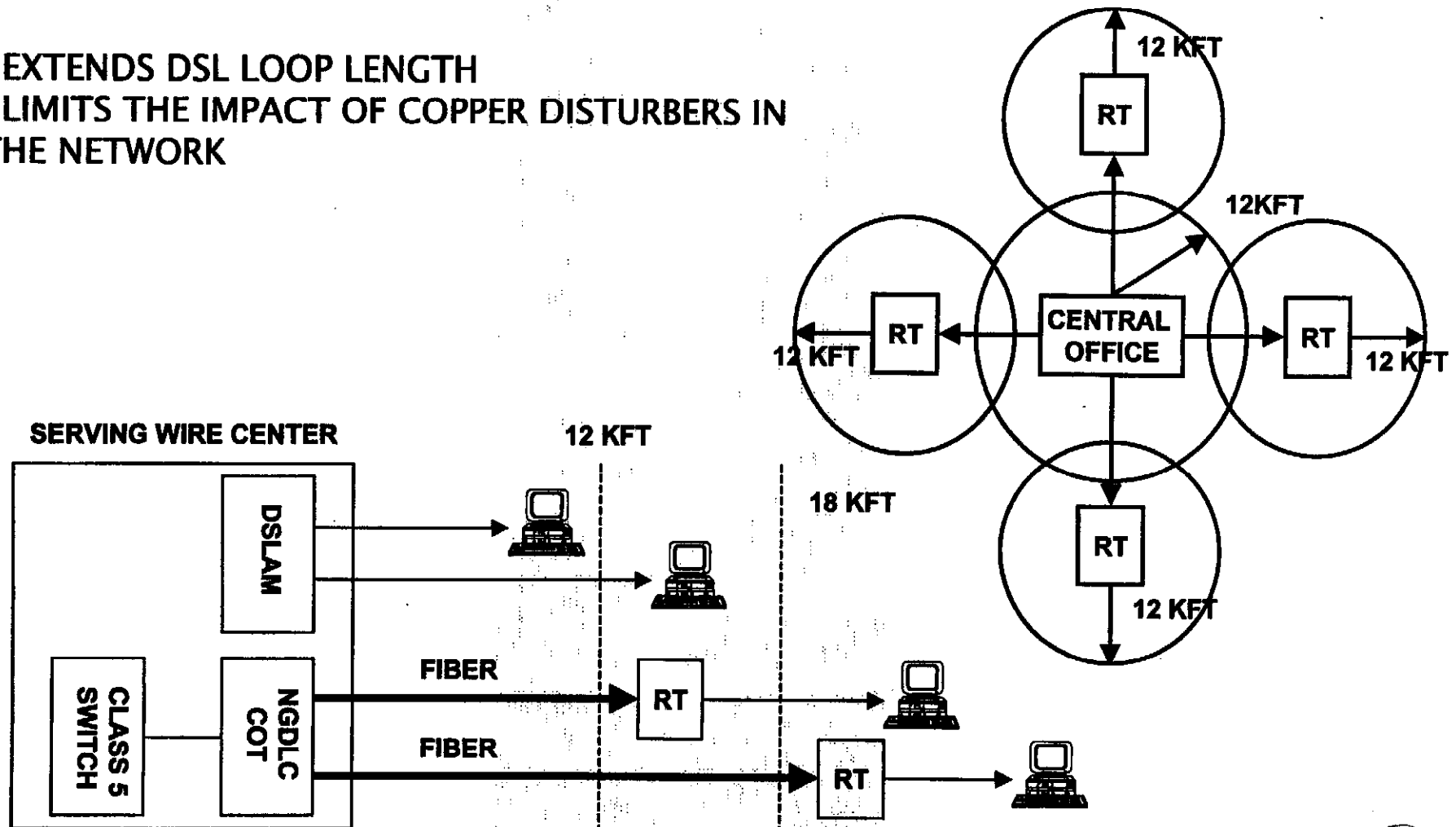## EXPANDING THE AVAILABILITY OF ADVANCED SERVICES

- Project Pronto encompasses several initiatives within SBC including the deployment of an advanced Broadband Network Infrastructure to expand the availability of Advanced Services to the mass market.

- Provides ADSL capability to customers that reside beyond the reach of CO Based DSLAMs.

- Adds capacity for mass market high speed internet access characterized by bursty traffic (asymmetrical in nature today).

- Overlay Network – Moves customers from the existing copper architecture to a hybrid Copper/Fiber network architecture utilizing Next Generation Digital Loop Carrier systems such as the Alcatel Litespan 2000 and Lucent AnyMedia.

- Deployed over a three-year period starting primarily in the Pacific Bell , Nevada Bell, Southwestern Bell and SNET regions in August and September and expanding to Ameritech in October and November of this year.

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SBC PROJECT PRONTO-
EXPANDING THE AVAILABILITY OF ADVANCED SERVICES

- EXTENDS DSL LOOP LENGTH
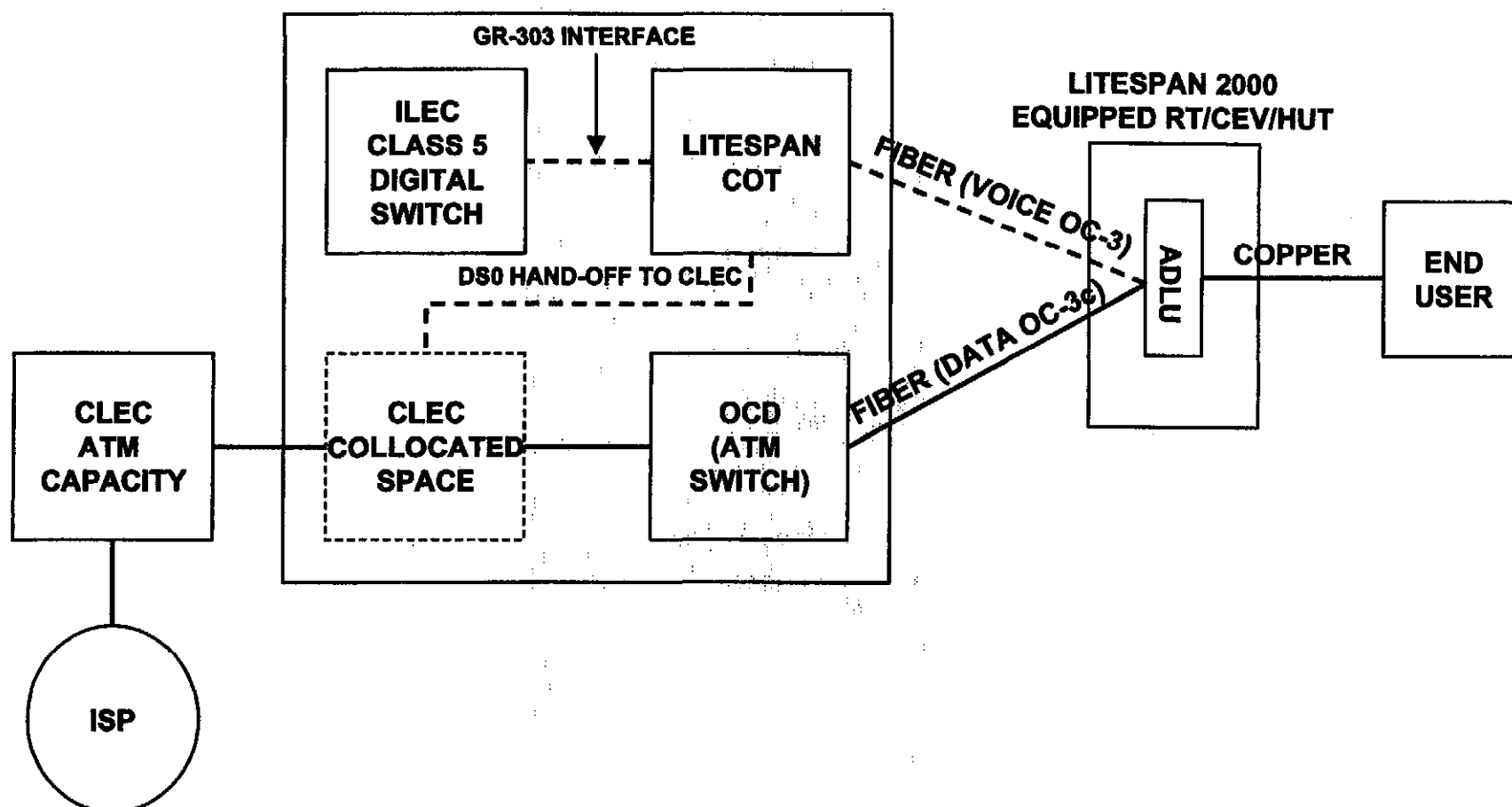- LIMITS THE IMPACT OF COPPER DISTURBERS IN THE NETWORK

SBC PROJECT PRONTO-
HIGH LEVEL NETWORK ARCHITECTURE

GR-303 INTERFACE

ILEC CLASS 5 DIGITAL SWITCH

LITESPAN COT

DS0 HAND-OFF TO CLEC

CLEC COLLOCATED SPACE

OCD (ATM SWITCH)

CLEC ATM CAPACITY

ISP

LITESPAN 2000 EQUIPPED RT/CEV/HUT

FIBER (VOICE OC-3)

FIBER (DATA OC-3c)

ADLU

COPPER

END USER

SBC PROJECT PRONTO-
IMPACTS FOR CLECs

- Existing CLEC Options To Mitigate Loop Length And Conditioning Limitations:

  - Shorten loop lengths by moving DSLAM like functionality to the Remote Terminal.

  - Requires collocation of DSL equipment (i.e. DSLAMs) in new and existing CEVs, huts and cabinets if space and environmental capacity is available; and/or requires CLEC to deploy CLEC RTs as adjacent collocation to existing CEVs and huts.

  - Requires CLEC Access to Unbundled Sub-Loops as defined by the UNE Remand Order at the first accessible point of access to the sub-loop.

  - Requires dark fiber transport from the remote terminals to the Serving Wire Center and/or CLEC locations where available.

- ALTERNATIVE SOLUTION: Broadband Service (e.g. PRONTO Network Architecture).

SBC PROJECT PRONTO-
IMPACTS FOR CLECs

- SBC will offer the Broadband Service to provide CLECs access to the Pronto deployed network infrastructure:

  - Relieves space limitation problems of having to collocate in RTs
  - Reduces CLEC capital requirements
  - Provides use of the existing provisioning and maintenance flows
  - Increases the utilization of the slots and associated pairs in each RT.

- CLECs will continue to have all other options available to them today.

- The SBC Broadband Service is available to CLECs on a non-discriminatory basis.

- Pricing for the Broadband Service is being offered voluntarily by SBC at UNE based rates. However, the service itself is not being offered as a stand-alone UNE.

- SBC will not object to CLEC arbitration under Section 251/252 of the Act in regards to Rates but will object to any such arbitration of terms and conditions of the product offering.
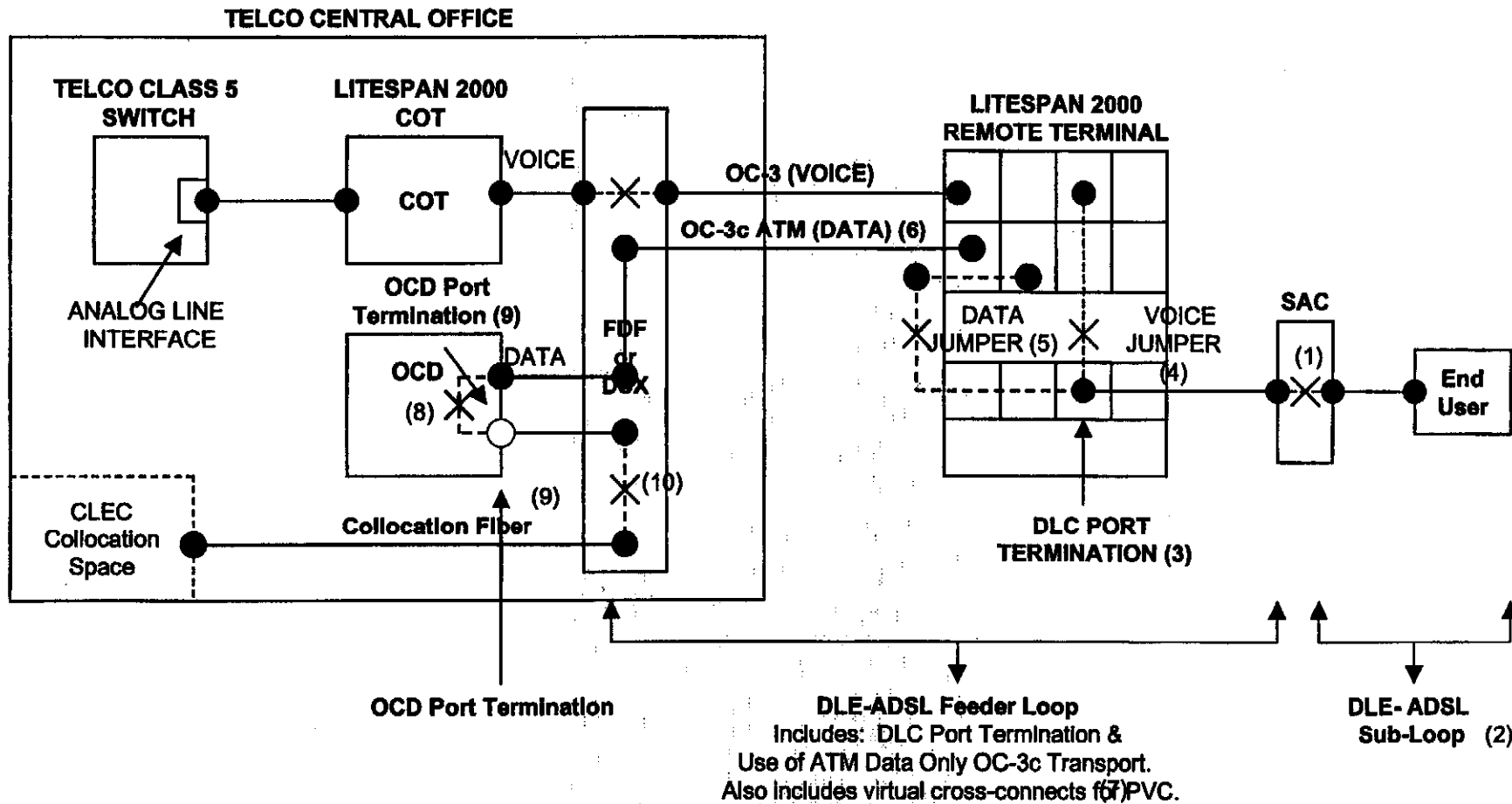
SBC PROJECT PRONTO-
BROADBAND SERVICE

- The Broadband Service Consists of the Following Network Service Arrangements:

- Sub-Loops & Loops:
    - Line Shared – HFPSL – The TELCO will offer CLECs the use of the high frequency portion of the sub-loop integrated to the TELCO NGDLC; or

    - Data Only – The TELCO will also offer a non-line shared, dedicated data copper loop facility.

    - Combined Voice & Data – The TELCO will also offer CLECs a combined voice and data loop under which the CLEC will be provided a full sub-loop for the provision of both voice and data plus a voice transport path from the RT to the CLECs collocation arrangement.

- Permanent Virtual Circuits – A permanent virtual circuit will provide data connectivity from the termination point of the copper facility in the NGDLC to the OCD.

- OCD Port Termination – An OCD Port Termination will be offered to CLECs in order to route traffic to the CLECs collocation arrangement in the serving wire center.

DIAGRAM 1:
BROADBAND DATA SERVICE
(LINE SHARED OR DATA ONLY)

(1) DLE ADSL SAC Cross Connect	(5) DLC Virtual Circuit - Data	(9) **OCD Port Termination (OC-3 or DS3)**
(2) **DLE-ADSL HFPSL** UDT)	(6) OC-3c Dedicated for Data	(10) OCD Cross-Connect to Collocation (or
(3) DLC Port Termination	(7) **DLE-ADSL Feeder**	
(4) DLC Virtual Circuit - Voice	(8) OCD Virtual Cross Connect	

DIAGRAM 2:
COMBINED VOICE & DATA (DRAFT)

TELCO CENTRAL OFFICE

IDF   MDF   LITESPAN 2000 COT   FDF

LITESPAN 2000 REMOTE TERMINAL

DS0

COT

VOICE

OC-3 (VOICE)

OC-3c ATM (DATA) (6)

OCD Port Termination (9)

CLEC COLLO.

OCD

DATA

SAC

(5)   (4)

(1)

Voice Switch

(8)

(10)

End User

(9)

(10)

DLC PORT TERMINATION (3)

ATM Capacity

Collocation Fiber

DLE-ADSL Feeder Loop
Includes: DLC Port Termination &
Use of ATM Data Only OC-3c Transport.
Also Includes virtual cross-connects for PVC.
(7)

DLE- ADSL Sub-Loop (2)

(1) DLE ADSL SAC Cross Connect

(2) **DLE-ADSL HFPSL UDT)**

(3) DLC Port Termination

(4) DLC Virtual Circuit - Voice

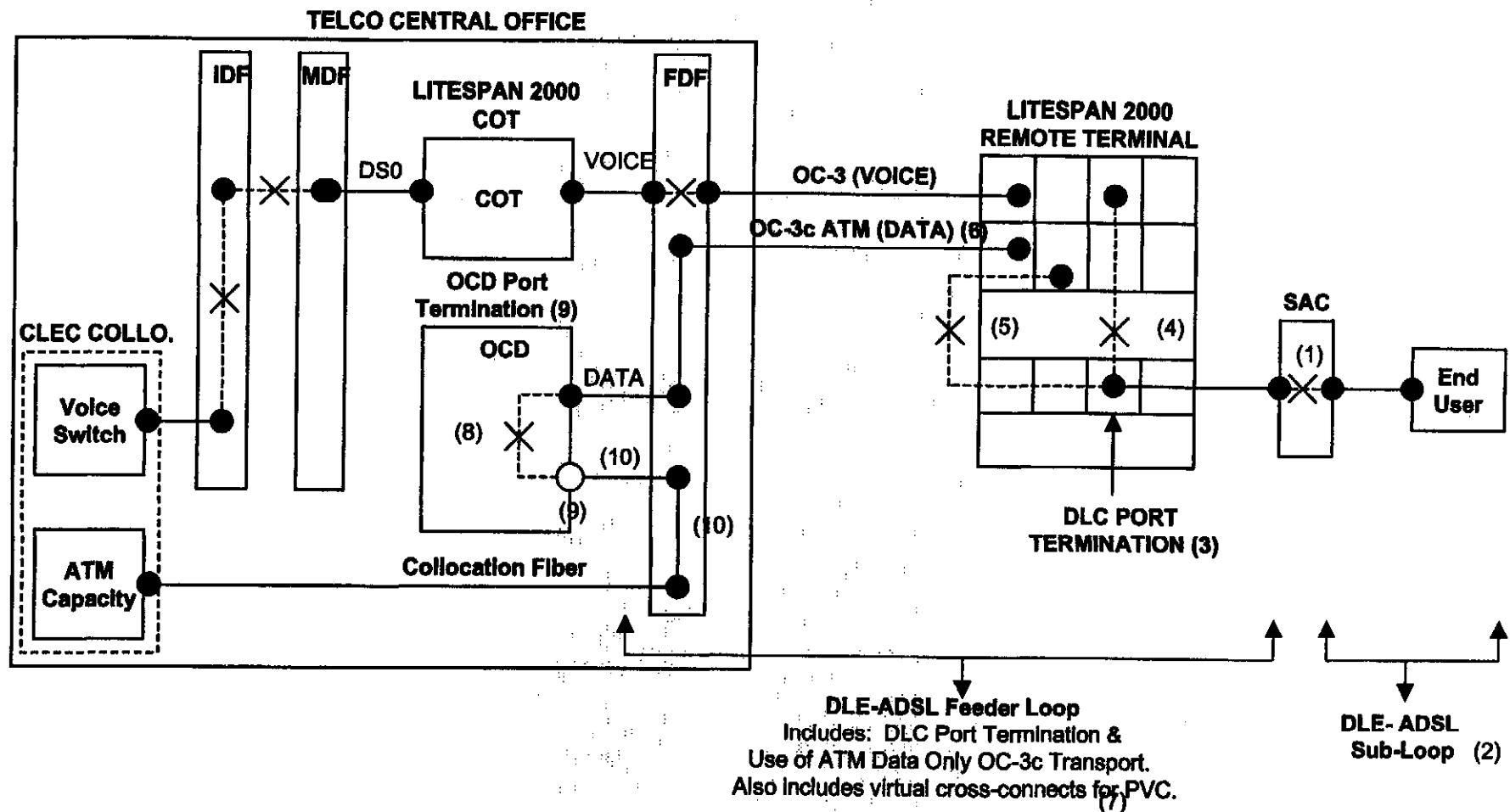(5) DLC Virtual Circuit - Data

(6) OC-3c Dedicated for Data

(7) **DLE-ADSL Feeder**

(8) OCD Virtual Cross Connect

(9) **OCD Port Termination (OC-3 or DS3)**

(10) OCD Cross-Connect to Collocation (or

(24)

SBC PROJECT PRONTO.

BROADBAND SERVICE

- ## STEP 1: INFRASTRUCTURE BUILD

  - The Broadband Network Service arrangements are divided into two sub-groups: Infrastructure and End User Specific.

  - The infrastructure elements consist of the following: The OCD port termination and associated cross-connects to CLEC collocation areas.

  - CLECs will be provided, via network disclosure, central office and RT locations that are equipped with the DLE infrastructure.

- ## INFRASTRUCTURE SERVICE ORDERS

  - The infrastructure elements will be ordered via one (1) Access Service Request (ASR).

  - In addition to the ASR, CLECs will be required to submit a Customer Information Form (CIF) for each OCD port they purchase. The CIF will contain information such as virtual path and channel indicators and connection types (UNI DCE or DTE) to the OCD.

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SBC PROJECT PRONTO-
BROADBAND SERVICE

- ### STEP 2: END USER SPECIFIC ORDERS

    - The End User Elements Consist of the Following: The DLE-ADSL Feeder and the DLE-ADSL HFPSL or DLE-ADSL Sub-Loop.

- ### END USER SERVICE ORDERS

    - The infrastructure elements will be ordered via one (1) Local Service Request (LSR).

    - In addition to the LSR, CLECs will be required to build a profile of services they wish to offer in the TELCO Network Management Systems for both the OCD and the NGDLC equipment in the remote terminal site. The profile will allow CLECs flexibility in the services they offer to their end users.

- ### LOOP QUALIFICATION

    - A pre-order loop qualification will be is the triggering event for ordering the Broadband Service versus the traditional DSL infrastructure network elements. On a loop qual for either a TN or customer address, the loop qual will return that the loop is not DSL capable, but will alert CLECs that a Remote Terminal is available from which to serve the customer and provision a DSL service.

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SBC PROJECT PRONTO.
BROADBAND SERVICE

- CLEC TRAINING/HANDBOOK

  - An internal pilot of CLEC training on the Broadband Service was completed May 31, 2000. The external pilot is scheduled for June 16, 2000.

  - The CLEC Handbook (CLEC Online) is being updated at this time in regards to the service offering.

  - Network disclosure information is available at the following address: *www.sbc.com/PublicAffairs/PublicPolicy/pronto_gateways/Home.html*

SBC PROJECT PRONTO.

BROADBAND SERVICE

ACCESSIBLE LETTER (BROADBAND SERVICE AGREEMENT)

- Accessible letters were issued by region outlining the Broadband Service agreement.

- CLEC 00-171 SWBT
- CLECT 00-101 SENET
- CLECC 00-223 PACIFIC BELL
- CLECN 00-125 NEVADA BELL
- CLECAM 00-094 AMERITECH

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PRONTO
BROADBAND INFRASTRUCTURE
Today ... and Tomorrow

Matthew Wallace
Director - New Technology Introduction
Pronto/Access